ABSTRACT

A fabrication process of a flash memory device includes microwave excitation of high-density plasma in a mixed gas of Kr and an oxidizing gas or a nitriding gas. The resultant atomic state oxygen O* or hydrogen nitride radicals NH* are used for nitridation or oxidation of a polysilicon electrode surface. It is also disclosed the method of forming an oxide film and a nitride film on a polysilicon film according to such a plasma processing.

BEST AVAILABLE COPY